AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 10/608,405

Filing Date: June 26, 2003

Title: COMPOSITE THERMAL INTERFACE DEVICES AND METHODS FOR INTEGRATED CIRCUIT HEAT TRANSFER

Assignee: Intel Corporation

REMARKS

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This responds to the Office Action mailed on March 22, 2005, and the references cited therewith.

Claims 8-9, and 15-27 are amended, no claims are canceled, and no claims are added; as a result, claims 1-27 remain pending in this application. Applicant has corrected a typographical numbering error discovered in the originally submitted claims. Claim 14 had been inadvertently used on two different claims. If the Examiner has other suggestions on how to best correct this typographical error, Applicant's attorney welcomes a telephone call to discuss the matter.

§112 Rejection of the Claims

Claims 1 and 8-9 were rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness.

Regarding claim 1, the rejection stated that it was "not clear what happens to the surface features along the deforming interface with respect to the heat conducting structure and first metal containing layer once plastic deformation takes place."

Applicant respectfully submits that the language of claim 1 regarding surface features satisfies the requirements of 35 U.S.C. § 112, second paragraph. The claim language provides that the first metal containing layer deforms *into* (emphasis added) surface features along a deforming interface. As described in the specification in general, and specifically on page 6, lines 24-31:

After cold forming the first metal containing layer 302 against the heat conducting structure 304, a number of cold formed features are observed at the first interface 303. In one cold formed feature, the deformation causes the deforming portion of the material to flow in a conforming manner into surface features of a mating surface. In this way, substantially all gaps present at the first interface 303 are removed as the first metal containing layer 302 is deformed into surface features on the heat conducting structure 304.

By deforming into the surface features, the claim indicates that the surface features remain substantially in their original state, even though limited deformation or cold forming of the surface features may also take place.

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Reconsideration and withdrawal of the 35 U.S.C. § 112, second paragraph with respect to claim 1 are respectfully requested.

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Regarding claims 8 and 9, the rejection stated that it was "not clear what is meant by the language of 'heat placing' in line 1 of claims 8, 9." Applicant has amended claims 8 and 9 to change the term "heat placing" to "placing." Applicant has further corrected antecedent basis issues in claims 8 and 9. Applicant respectfully submits that claims 8 and 9 now comply with the requirements of 35 U.S.C. § 112, second paragraph. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims Objections

Claim 22 was objected to because of informalities. The objection stated that in line 2, language of "a processor" should be "the processor chip." Applicant has amended claim 22 as suggested by the Examiner. Reconsideration and withdrawal of the objection to claim 22 are respectfully requested.

Allowable Subject Matter

Claims 2-7 and 10-26 were allowed. Applicant respectfully notes that after the above mentioned numbering correction, it is assumed that claims 2-7 and 10-27 are allowed.

Claims 1 and 8-9 were indicated to be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. § 112 set forth in the Office Action. Applicant respectfully submits that pursuant to arguments presented above, claim 1 is in condition for allowance. Applicant has amended claims 8 and 9 as discussed above and respectfully submits that they are now in conditions for allowance.

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CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6944 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By his Representatives,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 239 day of May, 2005.

Name

Signature